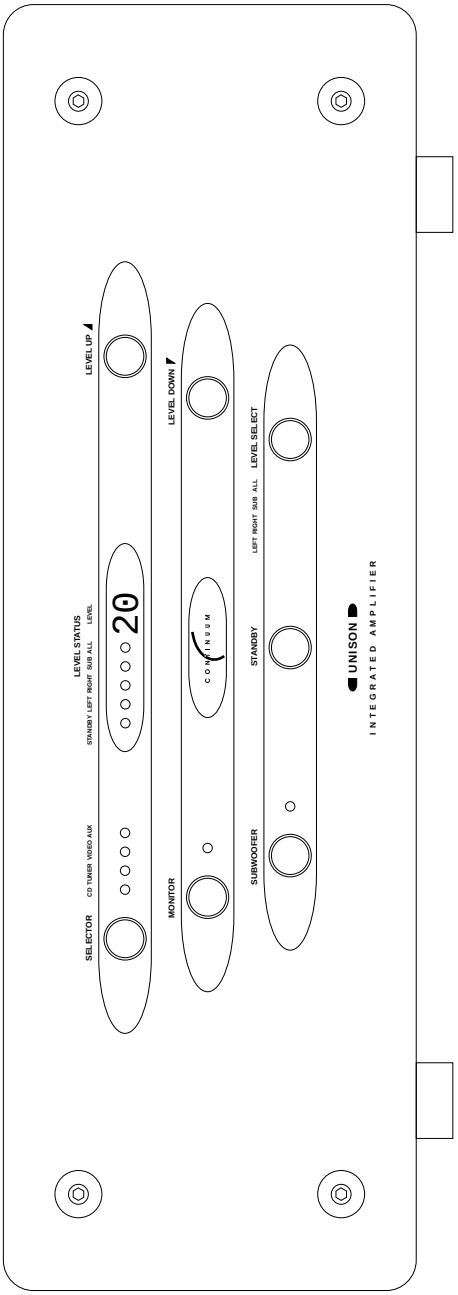
CONTINUUM

UNISON 3.3

OWNERS MANUAL



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CAUTION

WARNING

CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER SERVICEABLE PARTS INSIDE, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

THIS SYMBOL IS TO ALERT YOU OF THE PRESENCE OF UNINSULATED DANGEROUS VOLTAGE WITHIN THE UNIT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK.

THIS SYMBOL IS INTENDED TO ALERT YOU OF THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE UNIT.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD , DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE. TO AVOID ELECTRICAL SHOCK , DO NOT OPEN THE UNIT. REFER SERVICING TO QUALIFIED PERSONNEL.

CAUTION

- Never install or remove the power cord from the chassis unless it has been disconnected from the AC power source first.
- Never pull on the power cord when removing it from an AC power source. Grasp it by the plug.
- Do not leave the power cord connected to an AC power source unless it is connected to the unit.
- It is recommend that during extended periods of nonuse that the units power cord be unpluged from its AC power source.
- Route the AC power cord so that it will not be damaged or walked on.

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Thank you selecting Continuum Electronics. The Unsion Integrated Amplifier is a precision instrument that will provide you with many years of listening enjoyment. Please take a few moments to read this brief manual to insure maximum benefit from your electronic system.

LIMITED FIVE YEAR WARRANTY

Continuum Electronics extends to the original owner coverage of defects in materials and workmanship for a period of five years from date of purchase. This warranty does not include a) damage in shipment b) damage caused by accidental or intentional misuse or abuse c) units not registered with Continuum Electronics d) damage resulting from unauthorized modifications or repairs. Liability is limited to the repair or replacement, at our option, of any defective component and shall not include damage due to short circuits, property and or consequential damages which may result from the failure of this product.
If this product should ever require servicing, contact:

Coda Technologies, Inc
8274 Mediterranean Avenue
Sacramento, CA 95826
PHONE: 916.383.3653
FAX: 916.396.8296
www.coda-continuum.com

CUSTOMER RECORD

MODEL NO._____

SERIAL NO._____

DATE OF PURCHASE_____/_____/_____

DEALER NAME_____

DEALER ADDRESS_____

CITY_____

STATE_____

ZIP_____

OWNER_____

STREET ADDRESS_____

CITY_____

STATE_____

ZIP_____

The remote controlled Continuum Electronics Unison Integrated Amplifier is designed with a level of thoroughness reserved only for the finest preamplifier and amplifier gain stages. Analytical, design techniques both objective and subjective, are applied in an open-minded fashion with musical perfection as the goal.

PREAMPLIFIER SECTION

On the faceplate, the straightforward controls and display provide comprehensive functionality to the user. All input selections have LEDs to show when they are in use. Buttons control both volume and balance, with an LED display to show which channels are being adjusted. Settings for the volume and balance are precisely indicated in dB of attenuation by the LED display.

Gain is provided by the high performance Burr-Brown PGA2310, successor to the highly acclaimed Crystal Semiconductor CS3310. This new digitally controlled analogue device features an improved output buffer and increased voltage swing for high level input signals. Digitally controlled level tracking allows 1 dB per step attenuation without error. The digitally controlled stepped resistors and a zero crossing detection circuit allow for "zipperfree" operation. Total harmonic distortion is less than 0.005% with a signal to noise ratio approaching 130 dB.

Unlike other integrated amplifiers, Unison offers true “separates” performance. The preamplifier power supply even has its own independent transformer taps.

A reference voltage is developed by delivering constant current to zener diodes. The resulting voltage is heavily filtered and delivered through class-A followers. The non-reactive, low-impedance and extremely wide bandwidth voltage rails yield a perfectly stable power source for the gain stages.

AMPLIFIER SECTION

Differential voltage gain throughout provides exceptional rejection of external noise and contributes to the inherent stability of the circuit. The unit also uses output followers operating without feedback.

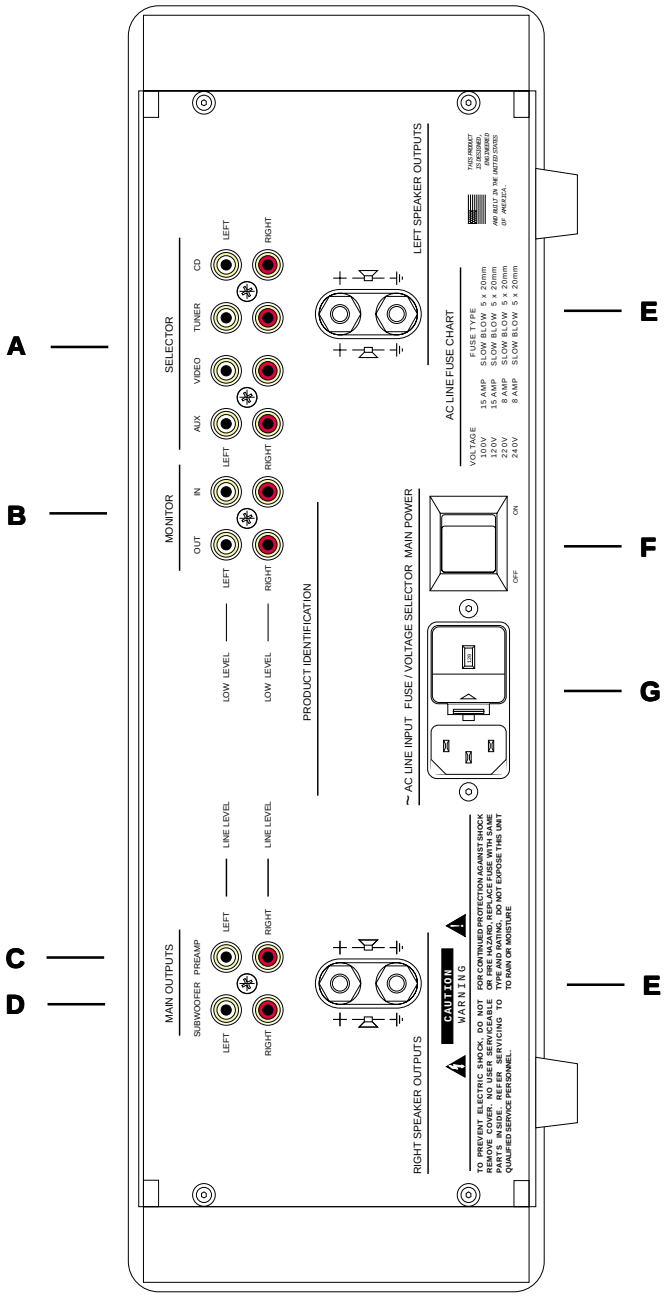
The front end is designed to provide a slew rate of 50 V/us without entering class B operation as is common in many other designs. This combined with excellent high frequency design insures linear operation at high speed. The supplies take a very direct approach to high performance. A top quality toroidal transformer capable of 2,000 VA is utilized, and 40,000 uF of total capacitance assure an overbuilt power supply.

The current stage is capable of producing peak current outputs in excess of 50 peak Amperes with a degree of linearity and speed which is not matched by other designs when producing only a fraction of this current. This is achieved by the implementation of several distinct circuit features.

Each channel uses 18 individual output transistors with a combined power rating of 3,600 Watts and 75 Amperes and a bandwidth of 10 MHz.

The Unison 3.3 operates in Class A up to approximately 7 Watts. At higher output levels, the amplifier slides into Class AB operation. The bias section is designed to produce a precision transition with no abrupt changes in distortion or output impedance. This "Precision Bias" technique yields seamless performance regardless of the complexity of the load impedance. With such linearity and bandwidth no overall feedback correction is used. One advantage of this is a high degree of immunity from interactions with complex speaker loads or cables.

The AC power entry module has a line fuse, a spare fuse and a power switch. Since the power draw is low, the preamp may be left on, except when installing, changing cables, or changing system components.



REAR PANEL CONNECTIONS

LOCATION

To provide for adequate ventilation you should allow at least six inches of unobstructed space above and a couple of inches on each side of the amplifier. Because of its large power supply, a local magnetic field may be picked up by CD players, turntables and the like. For this reason you should provide at least a foot of space between the Unison and these components. Be certain the Unison and all associated equipment is turned off before making any connections.

A. SELECTOR INPUTS

Signal inputs for CD, Tuner, Video, Aux.

B. MONITOR

Signal inputs and outputs for a tape deck or other recording device.

C. PREAMPLIFIER OUTPUTS

Signal outputs for an optional outboard amplifier.

D. SUBWOOFER OUTPUTS

Variable outputs for a powered subwoofer which track the master volume.

E. AMPLIFIER OUTPUTS

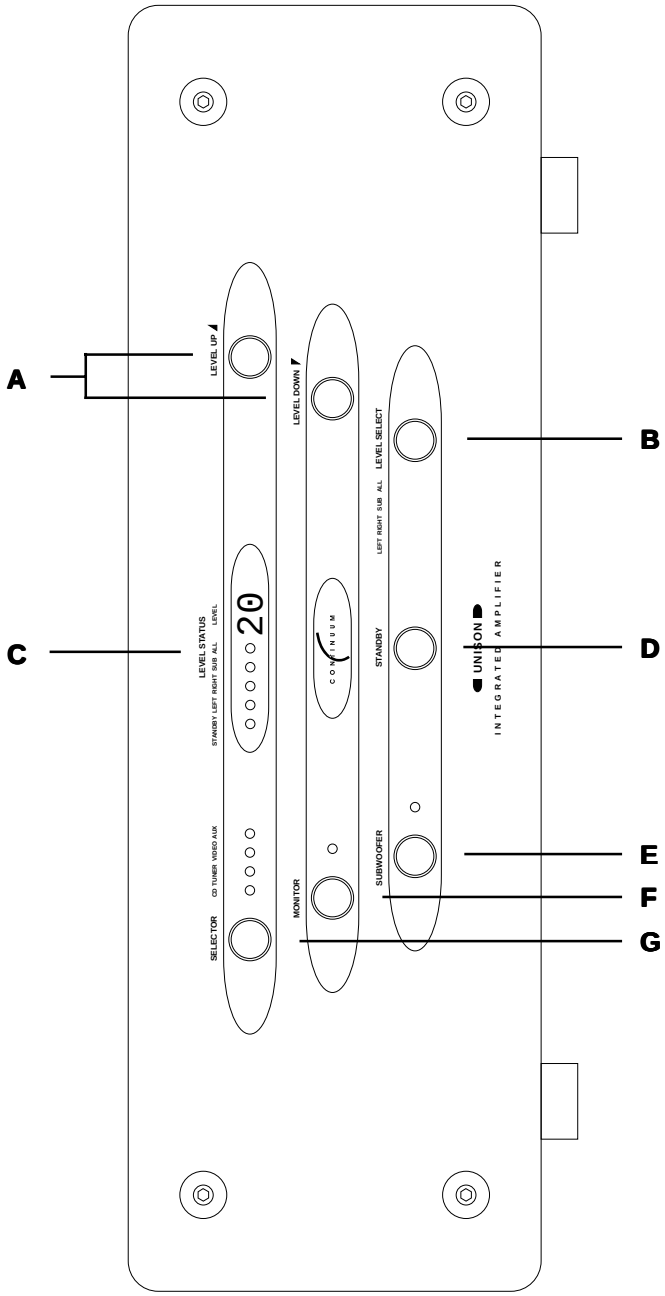
Signal output to your speakers is made through heavy-duty gold-plated five-way binding posts. Be sure of correct speaker phasing by matching the (+) on the amplifier to the (+) on the speaker and the (-) on the amplifier to the (-) on the speaker.

F. POWER SWITCH

The rear-mounted power switch on the Unison is intended only for initial powering of the unit and for complete shutdown for connecting cables. The rocker switch must be in the "ON" position for the Unison to power up and should only be turned off when the Unison has been in Standby Mode for at least 1 minute.

G. AC LINE INPUT

Insert the power cord into the AC receptacle and then connect to an appropriate power source. The fuse can be removed by pulling the fuse drawer out and clipping in a new one. Once all connections are made the power switch may be set to the on position. The Unison may be left on as it draws a negligible amount of power.



FRONT PANEL CONNECTIONS

A. LEVEL

A digital volume control adjusts the level. One button increases the volume; the other decreases the volume.

B. CHANNEL LEVEL / BALANCE SELECT

Relative inter-channel balance is adjusted bu using the Level Select button to choose right, left, sub, or all channels.

C. LED DISPLAY

The volume setting for each channel is indicated by this decibel (dB) display. The display ranges from maximum output, indicated by a display of 99, to a maximum attenuation, indicated by 00.

LEDs in the display window indicate STANDBY MODE (yellow pinpoint LED) and the CHANNEL mode currently selected. The LED to the left of the volume digits indicates that ALL channels are being controlled the VOLUME control.

The colored arrow LEDs indicate which channel is being adjusted. The arrows also serve as a reminder to continue advancing the channel select to the right until the round LED next to the volume display is illuminated. This indicates that the VOLUME function has returned to controlling ALL channel simultaneously.

D. STANDBY

Switches the amplifier section of the Unison on and off. In STANDBY, the preamplifier is still operational, thus, it may be used to drive an additional external power amplifier. NOTE: The Unison must be placed in STANDBY mode for at least 1 minute before turning the rear main power switch off.

E. SUBWOOFER

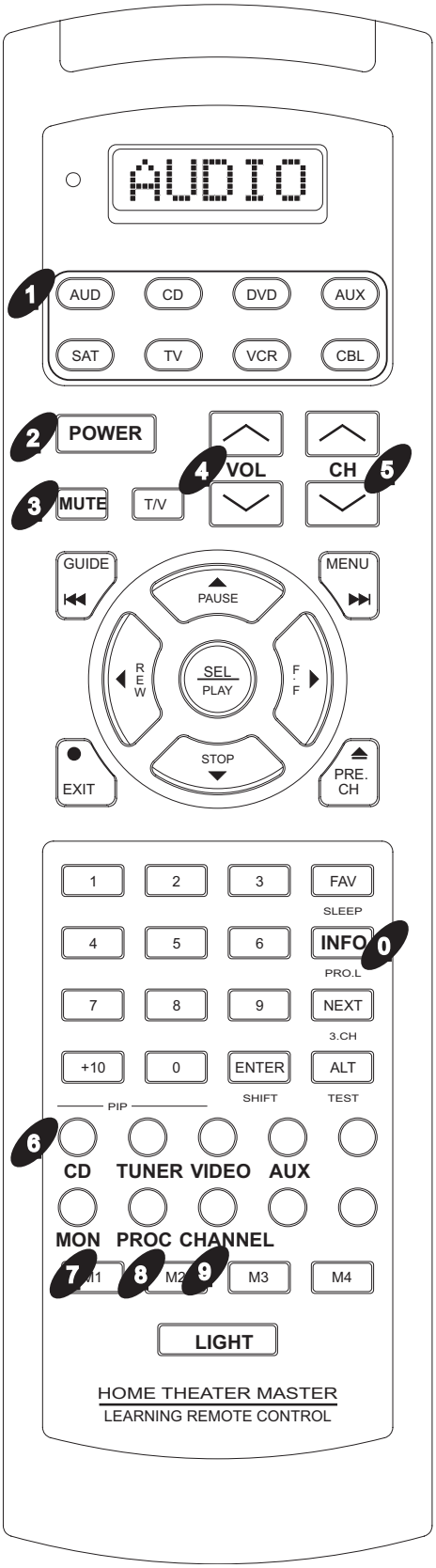
Switches the subwoofer output signal on and off.

F. MONITOR

For monitoring the output of a recording device (tape deck, mini disc, DAT deck, etc.).

G. SELECTOR

Selects the stereo input: CD, Tuner, Video, and Auxilary.



The Unison may be operated by remote control. To operate, set the remote to AUD. The optional URC universal learning remote includes access to advanced functions of the Unison and can also be used to control many other audio and video components. For instructions on the remotes other capabilities, refer to the separate universal remote manual.

1. REMOTE FUNCTION SELECTOR [AUD]
This series of 8 buttons are used to select an audio component to control. To control the Unison, press the [AUD] Button.

2. AMPLIFIER POWER / STANDBY [POWER]

3. [MUTE]
This button completely mutes the left and right channels, which is indicated by the flashing display on the Unison. To unmute you must press the mute button again.
Note: while muted you can still change the volume level.

4. VOLUME ADJUST [VOL]

5. INPUT SEQUENTIAL SELECT [CH]
These up and down buttons select the source which will be presented to the inputs. Individual inputs are sequentially selected by pressing these up/down buttons until desired input is reached.

6. INPUT DIRECT SELECT
[CD] [TUNER] [VIDEO][AUX]
This feature, only accessable from the enhanced URC remote, allows direct button access to individual inputs.

7. MONITOR LOOP [MON]
This button switches in the playback ouput of recording device(tape deck, mini disk, ect.). Tape record outputs are fixed to the input selected.

8. PROCESSOR / SUBWOOFER [PROC]
Depending on how your Unison is configured, this button either turns the subwoofer output on/off or activates an optional signal processor loop.

9. CHANNEL LEVEL / BALANCE [CHANNEL]
Relative inter-channel balance is adjusted by selecting the right, left, sub, or all channels. The selected channel iis indicated by the LEDs in the to the left of the volume display digits

0. DISPLAY MODE SELECT [INFO]
An enhanced feature only available from the URC remote on Unisons with software rev.12 and later. Turns off all LED indicators EXCEPT standby and the volume digits. Returns to full Display Mode by pressing [INFO] again or any function other than volume, mute, or standby.

If you wish to clean your amplifier use a diluted ammonia based cleaner. Do not use any abrasive cleaners or chemical solvents. Take care not to damage the aluminum faceplate, since aluminum is a medium hardness metal and can be scratched by the careless use of tools during installation.

The amplifier may overheat and the finish may fade if exposed to direct sunlight or intense heat sources for prolonged periods.

Save your box and packing material, they may be necessary for moving or shipping the unit for servicing by the factory.

RATED POWER
300 Watts/channel, 20Hz to 20kHz, both channels driven into 8 Ohms
600 Watts/channel, 20Hz to 20kHz, both channels driven into 4 Ohms

Class A Operation up to 7 Watts,
sliding to Class AB at higher output levels

BANDWIDTH
-3dB at 5 Hz through 100kHz

DISTORTION
Less than .05% from 10Hz to 20kHz at 300 Watts both channels driven into 2 through 8 Ohms

GAIN
26dB

CURRENT CAPABILITY
50 Amperes peak per channel

SLEW RATE
50 Volts/microsecound

INPUT IMPEDANCE
20k Ohms

OUTPUT IMPEDANCE
.08 Ohms from 20Hz to 20kHz

DAMPING FACTOR
Greater than 100

NOISE
More than 100dB referenced to rated output

POWER SUPPLY
2,000VA toridal transformer with independant rectifiers and 40,000 uF of capacitance

DIMENSIONS
Faceplate: 17 inches wide by 5.5 inches tall
Chassis: 16.75 inches wide by 6 inches tall by 14 inches deep

WEIGHT
55 lbs

ADDENDUM 12

The Unison Series 3 Integrated Amplifer represents an evolutionary design effort and includes several refinements and enhancements, based upon input from our engineering staff, prominent audio critics,and owners of previous versions of the Unison. Recent changes include:

The Burr-Brown PGA2310 replaces the Crystal CS3310 Digitally Controlled Anologue Attenuator

Preamp stage supply voltage raised to provide immunity from input overload. Input overload level raised to 10 Volts.

Vishay resistors used in preamp signal path

All IC sockets now Samtec w/gold pins

Volume Display Count reversed to 0-99

URC9000 Learning Remote Option provides additional functionality

LED Display Modes for partial visual muting of display

Improved Standby Power Switching eliminates turn-on thump.

Unison 3.1 raised to 125W into 8 Ohms

"Signature Mods" introduced, including options for upgraded audiophile connectorization, internal wiring, specialty solder, and custom finish and chassis elements.

Some of these options include:

Cardas®, WBT®, and Cliff® Binding Posts
Cardas® and Vampire® OFC RCA Connectors
Cardas® and Jena Labs® Chassis Wiring
Cardas® and WBT® Audiophile Solder
Special Gold and Silver Finishes
Custom chassis components.

For more information, visit our website at www.coda-continuum.com

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